



Army Energy Campaign
Writers' Workshop

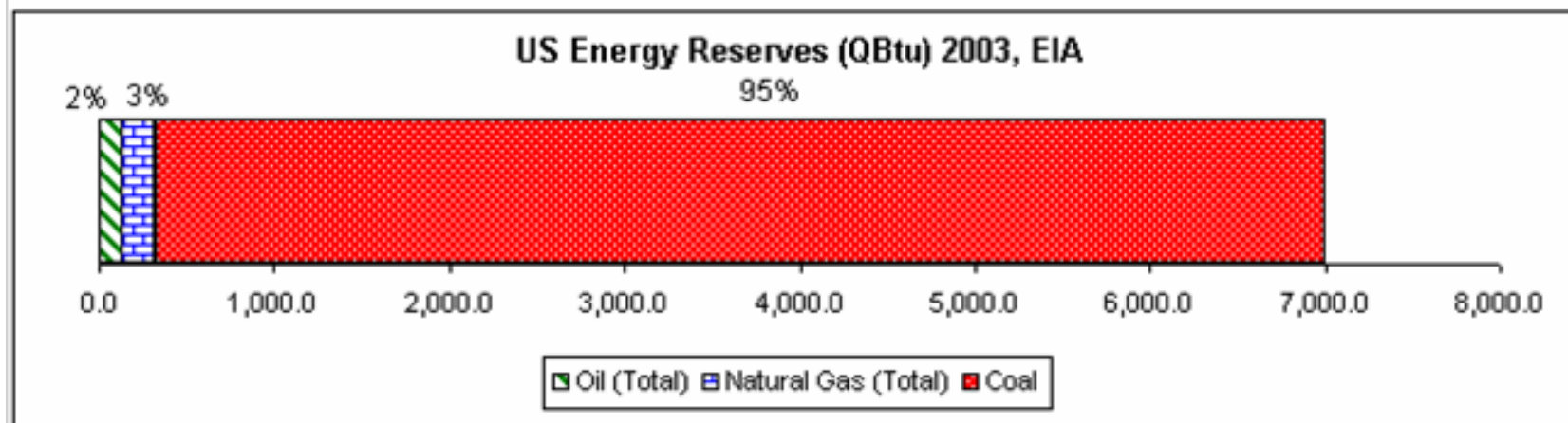
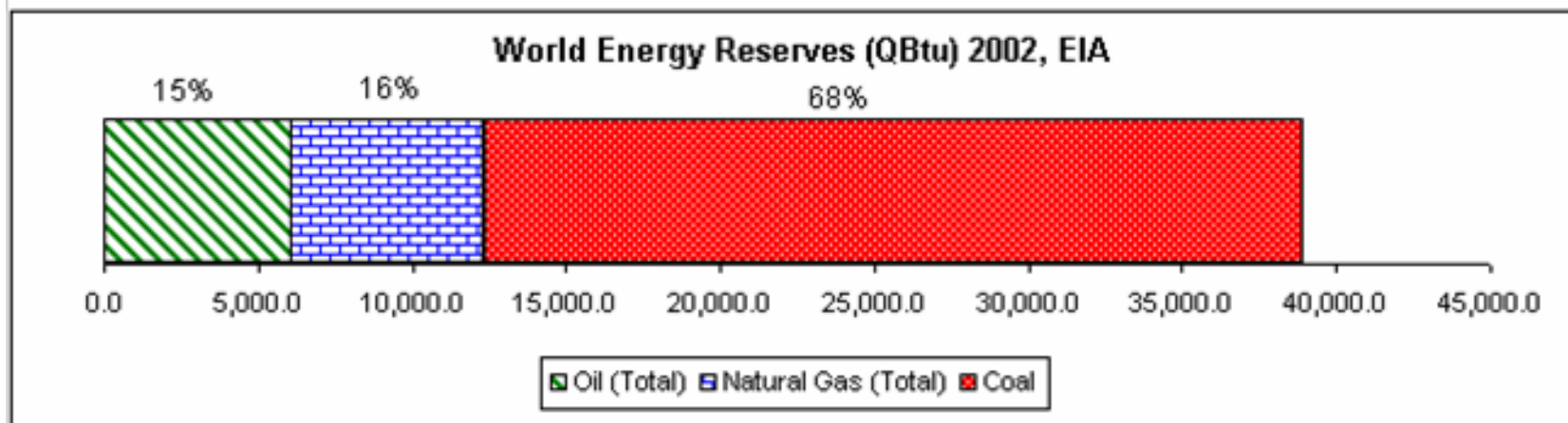
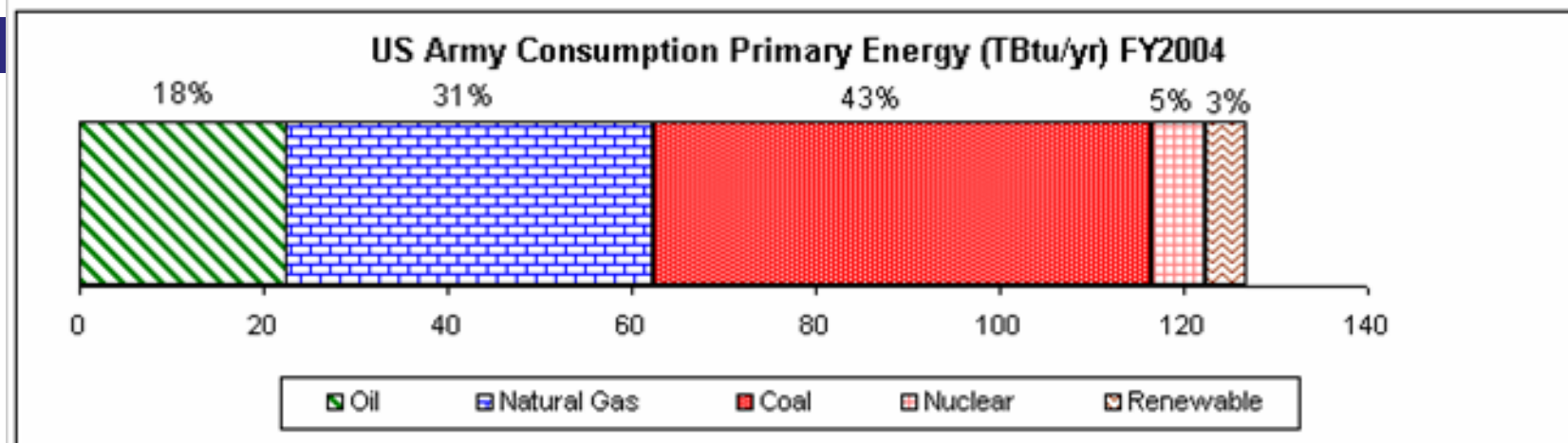
Energy Trends and Implications

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13 July 2005



Energy Issues

- The 21st Century will not be a repeat of the 20th Century.
- Energy sources are unevenly distributed around the world effecting:
 - ☐ Availability
 - ☐ Affordability
 - ☐ Sustainability
 - ☐ Security

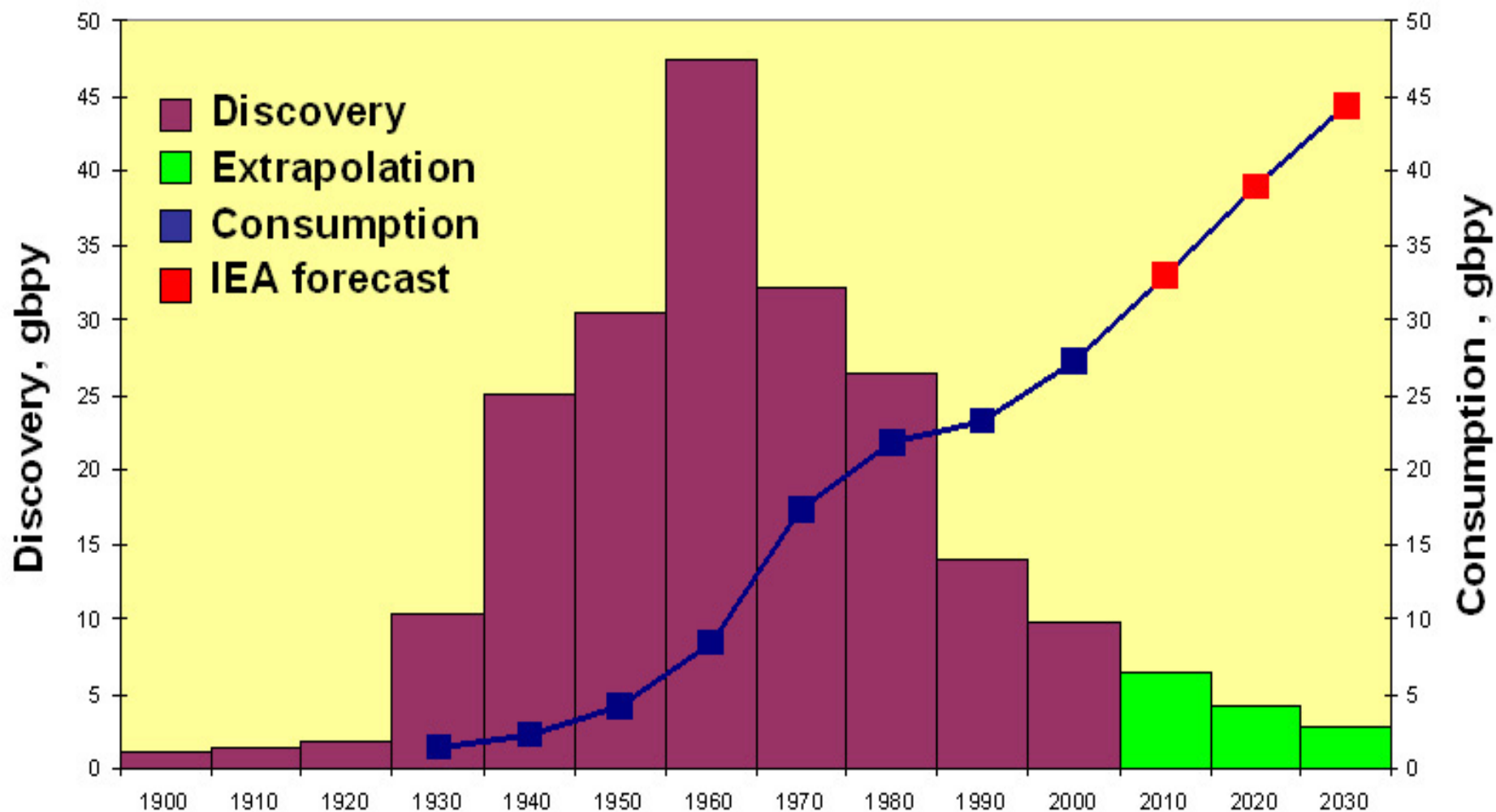




The Oil End Game

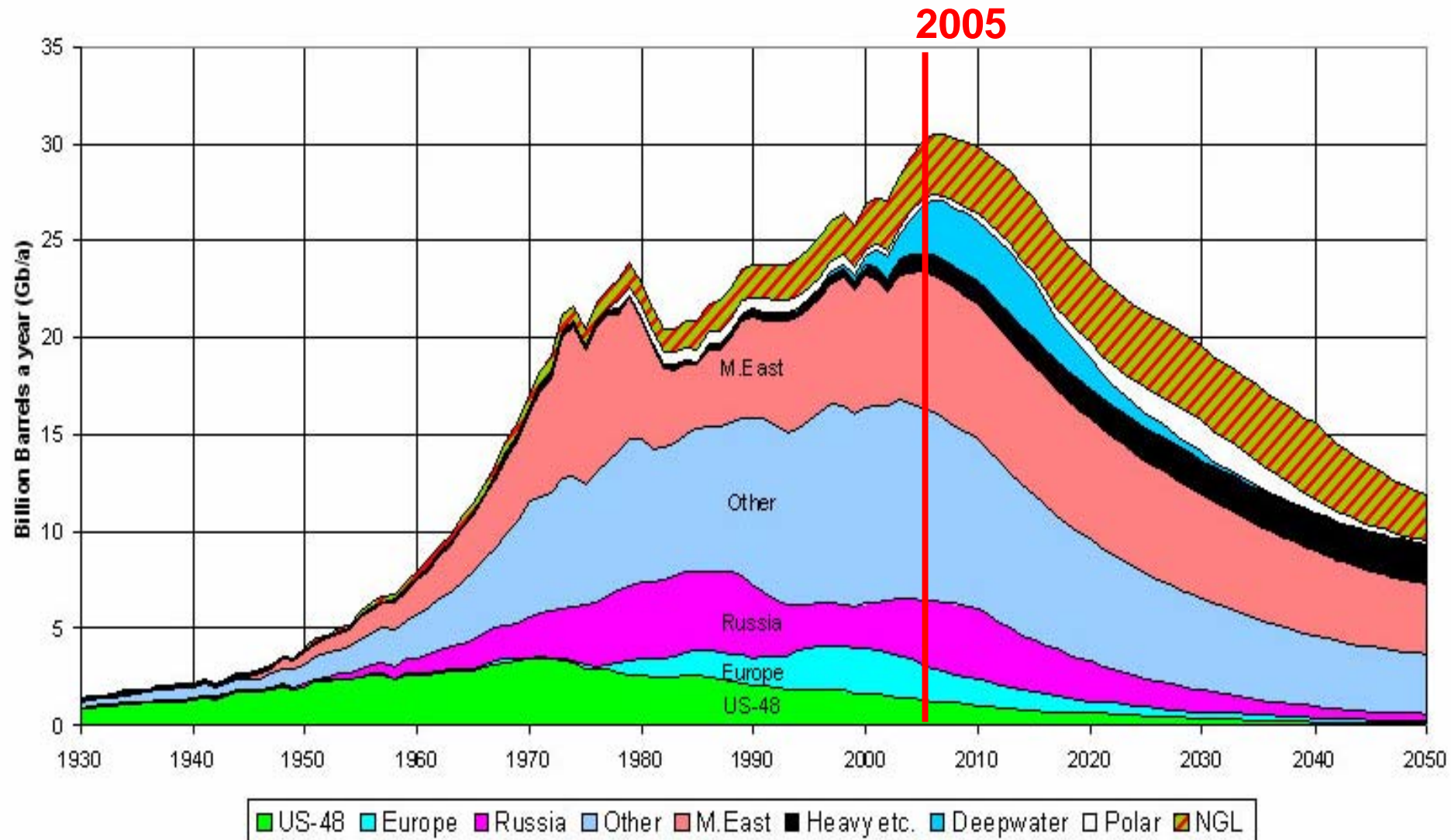
- Peak discoveries was in the 1960's – peak production follows in about 40 years.
- The end of cheap oil is right now. World total peak oil will occur in about 2008/2009.
- Don't bank on the Saudi's as they look to be in trouble. The peaked in April 2003 and are now flat-line at 9.5 MB/d.
- Iraq may may never reach full and reliable production again.

Comparison between discovery and consumption



OIL AND GAS LIQUIDS

2004 Scenario



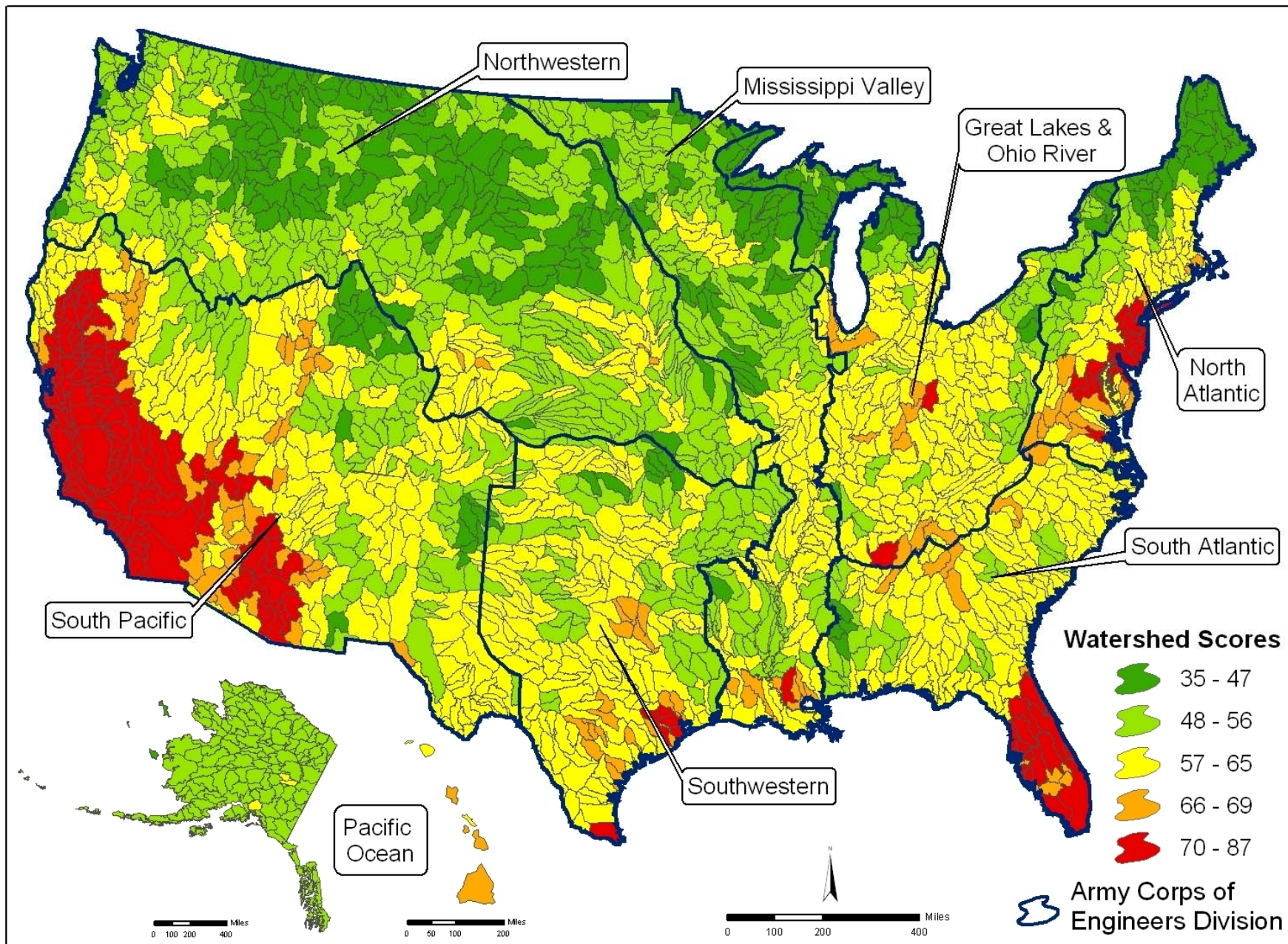
Natural Gas Picture

- US production dropping over 2%/year (30% DR).
- Canadians are not doing much better.
- Pipeline from Alaska financial support approved, now we need to build it (1 year supply).
- LNG our next great hope:
 - US Terminals need to be built:
 - 5 on-line, 7 permitted, 18 applications, 6 under development.
 - 9 have been withdrawn or put on hold (siting issues).
 - World-wide infrastructure needs to be built.
 - Current tanker fleet busy supplying China and Japan.
- World production peak in about 2030-35.

Energy Security

- Approaching 60% oil imports with domestic production decline.
- Natural gas next:
 - Currently 18% imports and will grow.
 - Expect large imports of LNG.
 - Electric utilities using 23% of our NG.
- We are dependent on the same unstable states for both our oil and natural gas future.
- Power grid in trouble due to natural gas prices and deregulation issues.

Oil and Natural Gas are 63% of our energy mix.





Implications for the Army

- Oil, natural gas, and water will be increasingly problematic.
- Need to consider transition to other sources.
- Energy efficiency and renewables need much greater emphasis. Their costs are decreasing and they are safe, clean, reliable, and secure.
- We must act now. Building yesterday today will not solve the problems.
- Sustainability must play a more primary role.